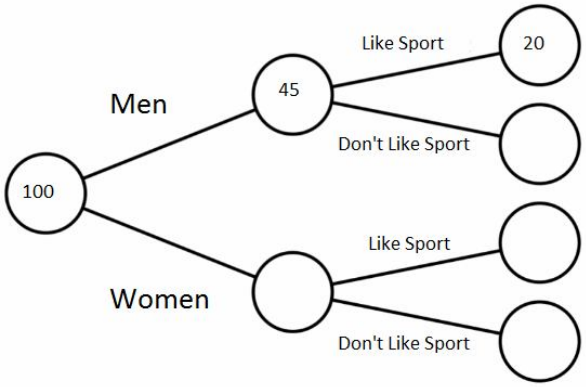
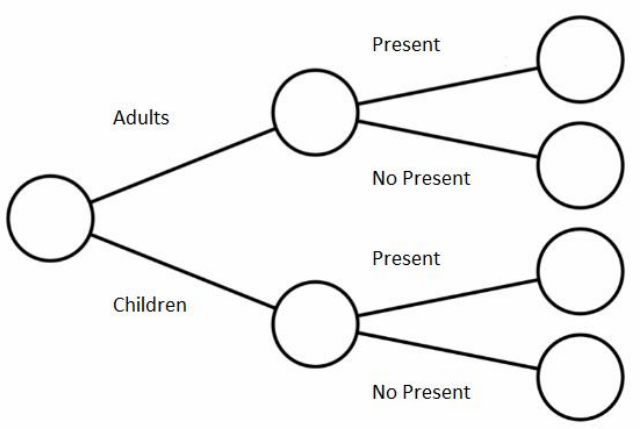
Frequency Trees 3 **www.m4ths.com**

(1) There are 100 people in an office. 45 are men and the rest are women. 20 of the men like sport and the rest of the men don't. 28 of the women like sport and the rest don't.
The frequency tree shows some of this information below.



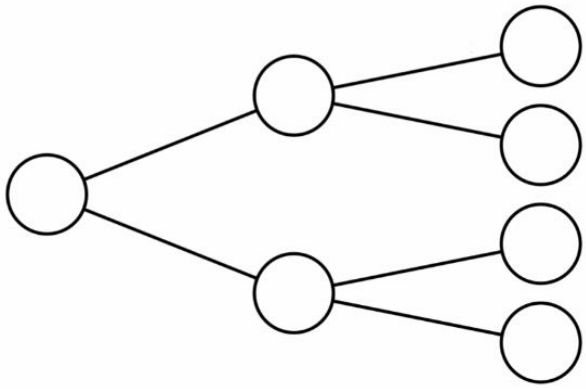
(a) Complete the frequency tree above.
(b) One person is chosen at random. Find the probability that the person is a woman who didn't like sport.
(c) A man is chosen at random. What is the probability that he liked sport?

(2) There are 80 people at a party. ¼ of the people are adults and the rest are children. Of the children 30 take a present and the rest don't. Of the adults, all but one take a present.
(a) Complete the frequency tree below



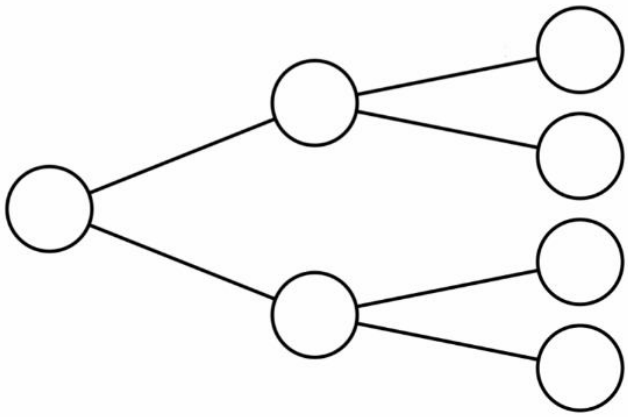
(b) What proportion of the people at the party are adults who have taken a present?
(c) What percentage of the children took a present?
(d) One person is chosen at random. Find the probability that they were an adult who didn't take a present.
(e) Fill in the blank: P(_____) = 19/80

(3) In a sports club there are 50 people. The ratio of males to females is 2:3. Of the males the ratio of those swimming to not swimming is 7:3. Of the females 60% swim and the rest don't
(a) Use the diagram below to show the information using a frequency tree



(b) What percentage of the people in the club were males who swam?
(c) What is the ratio of the women that swim to the men that swim?
(d) One person is chosen at random. Find the probability that the person is a female who doesn't swim.
(e) What percentage of the men didn't swim?

(4) There are men and women in an office.
The ratio of women to men is 4:1.
Of the women 25% bring their own lunch. The rest eat in the canteen.
Of the men, 6 bring their own lunch and 2 eat in the canteen.
(a) Show this information using the frequency tree below.

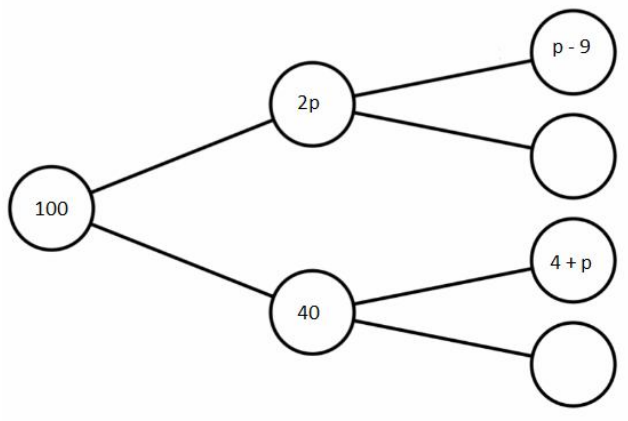


(b) One person is chosen at random. Find the probability that the person is a man who eats in the canteen.
(c) A woman is chosen at random. Find the probability that she brings he own lunch.
(d) What proportion of the people in the office brings their own lunch?

(5) There are 130 people at a party. 20% are adults and the rest are children. Half of the adults take food and 2/13 of the children take food.
(a) Explain why 15% of the people can't be adults.
(b) Draw a frequency tree in the space below to show the information given.

(c) Write the ratio of the number of adults bringing food to the number of children bringing food.
(d) What percentage of party goers were adults who took food?

(6) In a toy box there are pink toys and black toys. The toys are either electronic or they are manual. The frequency tree shows some information about the toys below.



There are 40 black toys in the box.
Of the black toys 6 are manual.
(a) Complete the frequency tree above.
(b) One black electronic toy is taken from the box. What proportion of the toys left in the box are pink manual toys?
(c) Write the ratio of pink toys to black toys in its simplest form.
(d) n pink toys are removed from the box. What proportion of the toys in the box are now pink?
(e) K% of the items are electronic pink toys. Find the value of K.